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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/817,279

04/02/2004

Patrick J. Meaney

POU920030010US1

2306

7590

07/06/2006

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EXAMINER

LAM, NELSON C

ART UNIT

PAPER NUMBER

2825

DATE MAILED: 07/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/817,279	Applicant(s) MEANEY ET AL.	
	Examiner Nelson Lam	Art Unit 2825	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>04/02/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Responsive to communication of 04/02/2004. Application 10/817,279 has been examined. In the examination of 10/817,279, claims 1-10 are pending.

Claim Objections

2. Claims 1-4 and 6-10 are objected to because of the following informalities:

As per claim 1, line 3 and line 4, the word "the" needs to be deleted. On line 4, a semicolon needs to be added to replace the comma after the word "checker". On line 6 and line 8, the word "logical" should be added before the word "gate". On line 7, the term "the circuit" lacks antecedent basis.

As per claim 2, line 1, the word "a" needs to be deleted. On line 3, the word "the" needs to be deleted. On line 2, a semicolon needs to be added to replace the comma after the word "level". On line 2, the term "the optimal mix of hierarchical level" lacks antecedent basis.

As per claim 3, line 2, the word "a" needs to be deleted. On line 4, the comma after the word "library" needs to be deleted.

As per claim 4, line 3, the term "the minimized circuit" lacks antecedent basis.

As per claim 6, Applicant may not further limit this claim by mixing the method steps of implementation of an orthogonality checker with the system steps of performing using the orthogonality checker. On line 3, the term "the checks" lacks antecedent basis. On line 5, a period needs to be inserted after the word "area".

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As per claim 7, line 2, the term "multiple checks" lacks antecedent basis.

On line 4, the term "the check" lacks antecedent basis.

As per claim 8, line 1, the term "the resulting OR values" lacks antecedent basis.

As per claim 9, line 1, the term "the structure for orthogonality check" lacks antecedent basis.

As per claim 10, line 3, a period needs to be deleted after the word "check". On line 1, the term "the structure determined" lacks antecedent basis.

Appropriate correction is required.

Drawings

3. The drawings are objected to because see Form PTO-948. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

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pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the **second** paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. **Claims 2, 4-6 and 7-10 are rejected under 35 U.S.C. 112, second paragraph**, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are:

Regarding claims 2 and 4-6, the existence of "the optimal mix of hierarchical level" has not been established.

As per claim 4, no steps are recited for determining an optimal mix of hierarchical levels.

As per claims 6-10, no steps are recited for determining an expected number for the gate count for implementing an orthogonality checker.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. **Claims 1 and 3 are rejected under 35 U.S.C. 102(b)** as being anticipated by Watai et al. (US Patent No. 5,745,373).

As per **claim 1**, Watai discloses a method for providing an area optimized binary orthogonality checker for a scalable selector system for controlling data transfers and routing in a data processing system (col. 2, line 42-52, where a circuit system is a scalable selector system) comprising the steps of:

determining the gate count for an implementation of an orthogonality checker (col. 1, line 26-33; Figs. 3-4; col. 1, line 62 to col. 2, line 13; col. 2, line 19-30; col. 4, line 34-37, where Figs. 3-4 implements an orthogonality checker), and

minimizing the gate count and area needed to implement an orthogonality checker given a library of logical gates to implement the circuit and the area for each gate in the library (Abstract; col. 1, line 26-33; col. 1, line 35-42; col. 3, line 4-10; Fig. 1, #106; col. 3, line 38-45; col. 3, line 51-59; Fig. 2; col. 4, line 18-37; col. 4, line 46 to col. 5, line 4; Figs. 3-4, where Figs. 3-4 implements an orthogonality checker).

As per **claim 3**, Watai discloses the method according to claim 1, where the area of a binary orthogonality checker is implemented in a static CMOS circuits by minimizing the gate count and area needed for checker implementation given a library of logical gates to implement the circuit and the area for each gate in the library (Abstract; col. 1, line 26-33; col. 1, line 35-42; col. 3, line 4-10; Fig. 1, #106; col. 3, line 38-45; col. 3, line 51-59; Fig. 2; col. 4,

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line 18-37; col. 4, line 46 to col. 5, line 4; Figs. 3-4, where Figs. 3-4 implements an orthogonality checker).

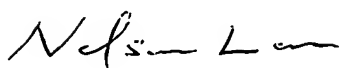
Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nelson Lam whose telephone number is 571 272-8318. The examiner can normally be reached on Monday-Friday from 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Chiang can be reached on 571 272-7483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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